REMARKS

Reconsideration of this application, as amended, is requested.

Claims 1-4 and 6-11 remain in the application. Claim 5 has been canceled. Claims 1-4, 6 and 7 have been amended to eliminate the numeric references that had been present in the original claims. Numeric references are not required under US patent law and are given no patentable weight. Accordingly, an amendment to eliminate numeric references is not a narrowing amendment and is not an amendment entered for purposes of patentability. Claim 1 also has been amended to define the invention more clearly and specifically to define the orientation of the locking surface with greater particularity. Claim 7 has been amended to clarify language that the Examiner found to be confusing. New independent claim 8 and new dependent claims 9-11 have been added to define the connector without reference to the terminal fitting.

The Examiner objected to the drawings in view of improper cross-hatching. Replacement sheets are submitted concurrently with this amendment to address the objection raised in the Office Action.

The Examiner objected to claims 1 and 7 in view of language that was considered to be unclear.

It is believed that the preceding amendment address the objection to the claims.

Claim 5 was rejected under 35 USC 112, second paragraph.

Claim 5 has been canceled.

The Examiner rejected claims 1-4 under 35 USC 102(e) as being anticipated by Bonavita et al., U.S. Patent No. 6,478,620. Claims 1, 6 and 7 were rejected under 35 USC 102(b) as being anticipated by Yamanashi, U.S. Patent No.

5,839,921. The Examiner identified elements of these references that were considered to correspond to the structure recited in the original claims.

Both of the references cited by the Examiner show resiliently deflectable locks with a locking surface defining an angle to the inserting direction. Both of these references, however, show locking surfaces very similar to the locking surfaces illustrated in the admitted prior art of FIG. 13. In this regard, the locking surface shown in each reference is aligned in exactly the opposite direction of the locking surface defined by the amended and new claims herein. It was the conventional wisdom that an undercut locking surface would engage the terminal fitting more securely. A rearwardly directed pulling force on the terminal fitting or wire would cause the engaging portion of the terminal fitting to be urged more tightly into the undercut corner defined by the locking surface.

The inventors herein, have identified a different problem that is not addressed by the admitted prior art or by the references cited by the Examiner. In particular, manufacturing tolerances invariably result in connectors where the terminal fitting can move slightly in a forward-to-rearward direction between the front wall of the cavity and the locking surface of the resiliently displaceable lock. Connectors used in an automobile are subject to almost continuous vibration during use. This vibration can generate micro-movement of the terminal fitting due to the small space that is likely to exist between the front wall of the cavity and the locking surface of the resiliently displaceable lock. This micro-movement can cause significantly abrasion of the components of the connector and can degrade the quality of the electrical connection. This problem is not recognized in the prior art, but was identified as a problem by the inventors herein.

The connector defined by the amended and new claims herein addresses the above-described problem. In particular, the very specifically defined orientation of the locking surface enables the locking surface to urge the terminal fitting tightly against the front wall of the housing. More particularly, the restoring forces of the resiliently displaceable lock combined with the specifically defined angular orientation of the locking surface urges the terminal fitting forwardly and tightly against the front wall of the housing. It is conceivable that a rearward pulling force on the terminal fitting could cause the lock to deflect in an unlocking direction. However, this potential can be addressed by the optional retainer set forth in dependent claims 2-4.

Nothing in the references cited by the Examiner would motivate the skilled artisan to redesign the locks in a manner that would bring the lock closer to the invention defined by the amended and new claims herein.

In view of the preceding amendments and remarks, it is submitted that the claims remaining in the application are directed to patentable subject matter and allowance is solicited. The Examiner is urged to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,

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